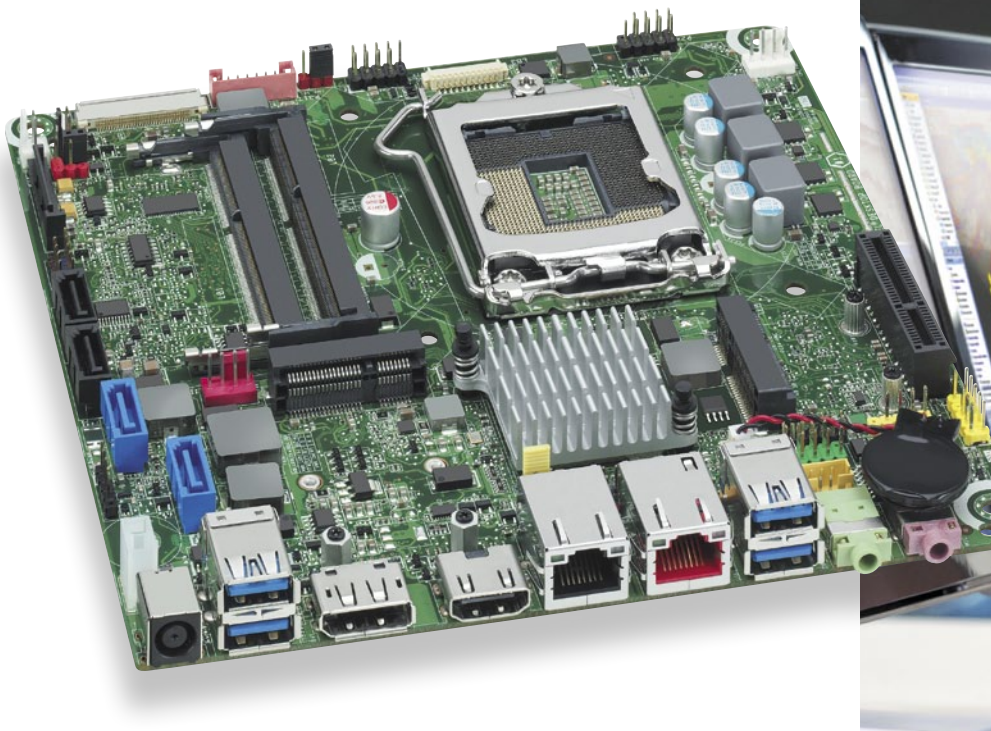
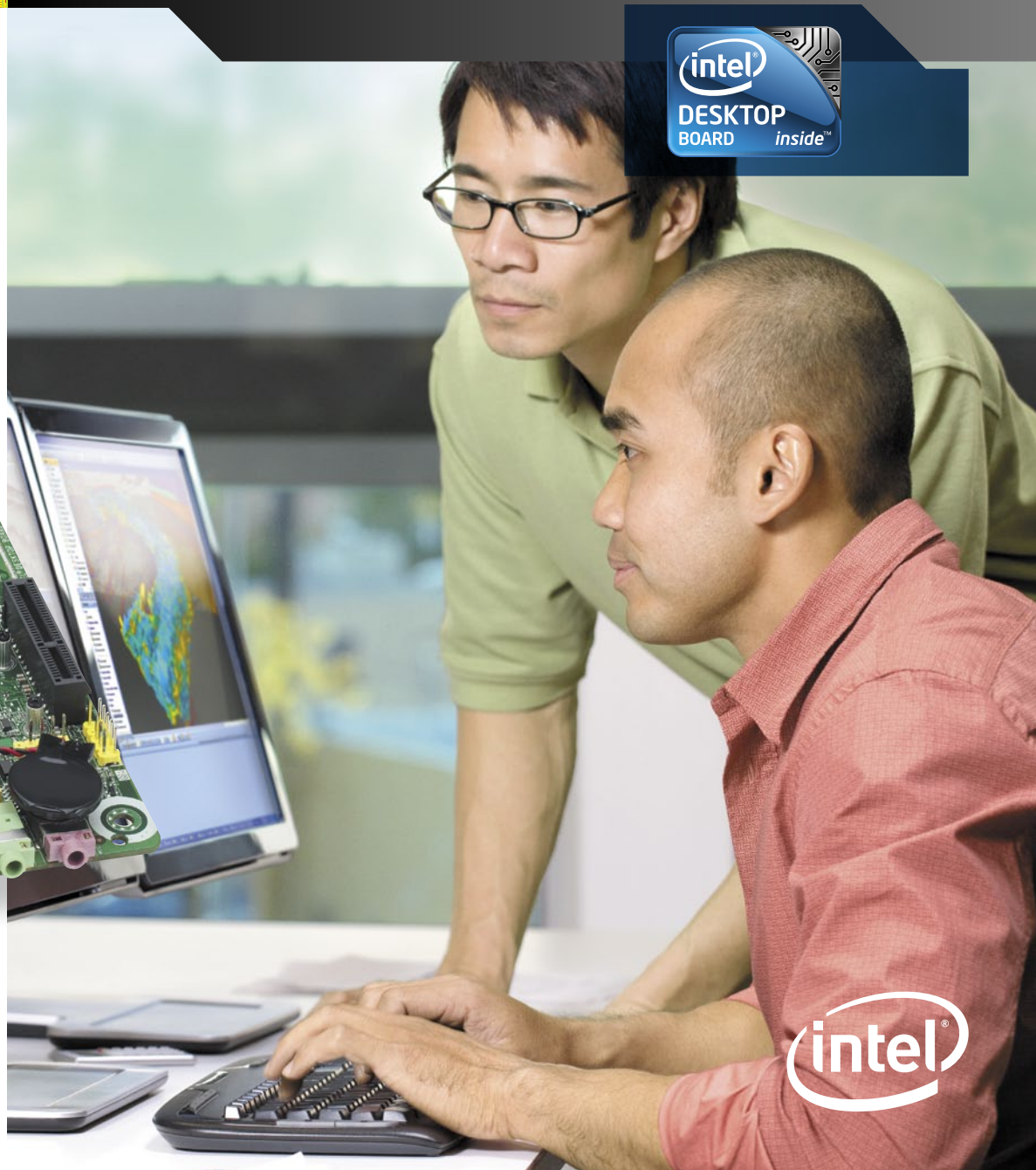
Intel® Desktop Board
DQ77KB
Executive Series

Thin Mini-ITX Form Factor



PRODUCT BRIEF

Executive Series



Intel® Desktop Board DQ77KB

Executive Series

Built for Business

Driven by today's sophisticated and competitive business environment, PC effectiveness and efficiency is key to operations success. The Intel® Desktop Board DQ77KB is designed and engineered to provide businesses a stable and reliable platform that enhances office productivity. It comes with better remote manageability and data security features. Based on the new Intel® Q77 Express Chipset with built-in Intel® Active Management Technology 8.0, the Intel® Desktop Board DQ77KB supports 2nd and 3rd Gen Intel® Core™ vPro™ processors in the latest LGA1155 package – bringing you unprecedented business PC performance. The 3rd Gen Intel® Core processors also feature optimized Intel® Turbo Boost Technology[1] and enhanced Intel® Hyper-Threading Technolgoy[2], which provide smarter performance and a seamless visual experience. Besides essential features, extensive expandability options are available in the Intel® Desktop Board DQ77KB, including 2 high current charging USB3.0, 1 full length PCI Express Mini (supports mSATA), 1 half length PCI Express Mini and 1 PCI Express 3.0 x16 graphic connector. The Intel® Desktop Board DQ77KB supports triple independent display when using Flat Panel Display (eDP* or LVDS), DisplayPort* and HDMI. It also offers dual integrated 10/100/1000 Intel® GbE LAN network connection to enable link aggregation and improves Ethernet throughput. The Intel® Desktop Board DQ77KB supports Intel® Identity Protection and Intel® Anti-Theft Technology to further safeguard businesses. With its thin-mini footprint of 20mm z-height, Intel® Desktop Board DQ77KB is the perfect choice for All-In-One (AIO) usage and applications that require small form factor board.

Seamless PC Remote Manageability

Uniquely powered by Intel® vPro™ technology, the Intel® Desktop Board DQ77KB is equipped with improved KVM Remote Control manageability, enabling remote access and control of a PC, even when the PC is in OOB (Out-Of-Band) state. Desk-side troubleshooting is tremendously reduced with KVM Remote Control, saving both time and money.

Data Security Features

Protect sensitive office data with RAID built into the Intel® Q77 Express Chipset, with multiple configurations to support RAID 0, 1, 5 and 10. Encryption and signature keys are protected from software-based attacks with onboard Trusted Platform Module (TPM). Also included in the Intel® Desktop Board DQ77KB are the award-winning antivirus software McAfee* Antivirus Plus and ESET* Smart Security 5 with 60-day and 45-day license respectively.

Multiple Operating System Certifications

The Intel® Desktop Board DQ77KB is certified with Windows* 7, RedHat* and SUSE* Linux*.

Product Stability

Intel® Desktop Board DQ77KB comes under Intel® Stable Image Platform Program (SIPP) and Intel® Extended Life Program (XLP).

The boxed Intel® Desktop Board DQ77KB solution includes:

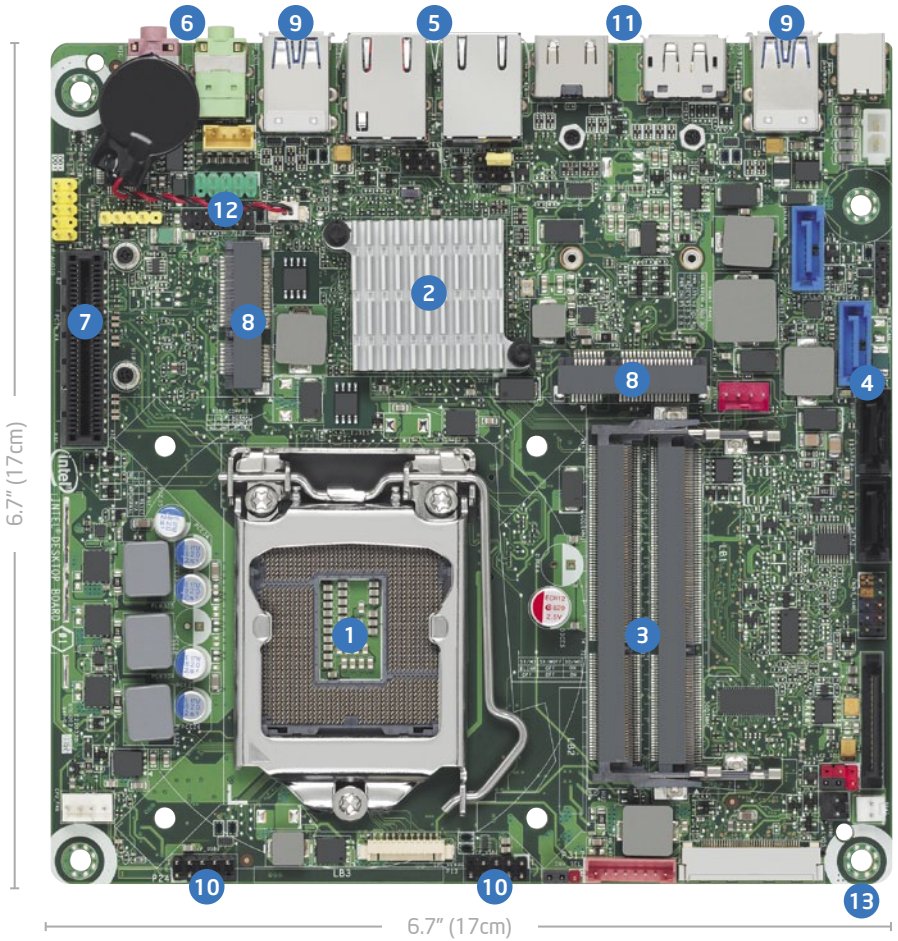
- ATX 2.2 compliant I/O shield
- SATA data cables
- SATA power cable
- Board and back panel I/O layout stickers
- Integration Guide
- TPM Quick reference guide
- Intel® Express Installer driver and software DVD

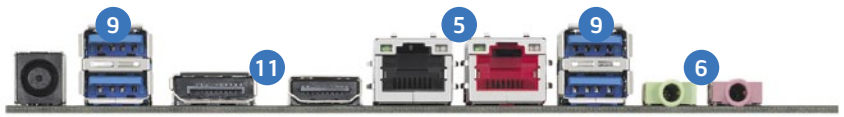
VALUE-ADDED SOFTWARE

CAPABILITY	SOFTWARE INCLUDED
Utilities	▪ Intel® Integrator Toolkit
Productivity	▪ Splashtop* Remote Desktop ▪ Laplink* PCmover* Express ▪ RealVNC* Viewer Plus ▪ Spiceworks* IT Desktop
Security	▪ McAfee* Antivirus Plus (60 days license) ▪ ESET* Smart Security 5 (45 days license)

Intel® Desktop Board DQ77KB

Features and Benefits





Executive Series

1. **Supports the 2nd and 3rd Generation Intel® CoreTM vProTM processors and other Intel® processors in the LGA1155 package**
2. **Intel® Q77 Express Chipset PCH**
3. **Dual-Channel DDR3 with two connectors for 1600/1333 MHz memory support:** Supports 1.2V to 1.8V memory voltage control for maximum DIMM compatibility
4. **4 SATA ports (2 SATA 6.0 Gb/s; 2 SATA 3.0 Gb/s):** Facilitates high-speed storage and data transfers at up to 6.0 Gb/s
5. **Dual Integrated 10/100/1000 Network Connection:** Enables link aggregation and improves Ethernet throughput
6. **Four-channel Intel® High Definition Audio[3]:** Audio subsystem with two analog audio outputs (2 + 2 independent multi-streaming)
7. **PCI Express* 3.0 x4 graphics connector**
8. **1 Full Length PCI Express* Mini (supports mSATA) and 1 Half Length PCI Express* Mini**
9. **4 USB 3.0 ports:** 4 back panel ports – 2 ports support high current
10. **5 USB 2.0 ports:** 5 ports via internal headers
11. **eDP*, LVDS, DisplayPort* and HDMI*:** Support tripal independent display capability for multiple display support
12. **Serial header**
13. **Thin Mini-ITX form factor**

Intel® Desktop Board DQ77KB

Technical Specifications

Executive Series

PROCESSOR
Processor Support
- Intel® Core™ i7 and Intel® Core™ i5 processors and other Intel® processors in the LGA1155 package.
- Supports Intel® 64 architecture[4]

CHIPSET
Intel® Q77 Express Chipset
- Intel® Q77 Platform Controller Hub (PCH)

PERIPHERAL CONNECTIVITY
- 4 SATA ports (2 SATA 6.0 Gb/s; 2 SATA 3.0 Gb/s)
- Dual Integrated 10/100/1000 Network Connection
- 4 Super-Speed USB 3.0 ports (4 back panel ports)
- 5 Hi-Speed USB 2.0 ports (5 internal headers)

SYSTEM BIOS
- 96 Mb Flash EEPROM with Intel® Platform Innovation Framework for EFI Plug and Play
- Advanced configuration and power interface V3.0b, SMBIOS 2.5
- Intel® Express BIOS update support

SYSTEM MEMORY
Memory Capacity
- Two 240-pin DIMM connectors supporting up to two double-sided DIMMs (16 GB[5] max)

Memory Types
- DDR3 1600[6] / 1333 SDRAM memory support
- Non-ECC Memory

Memory Modes
- Dual- or single-channel operation support

Memory Voltage
- 1.2 V to 1.8 V

HARDWARE MANAGEMENT FEATURES
- Processor fan speed control
- System chassis fan speed control
- Voltage and temperature sensing
- Fan sensor inputs used to monitor fan activity
- ACPI-compliant power management control

INTEL® PRO 10/100/1000 NETWORK CONNECTION
- Low-power design

EXPANSION CAPABILITIES
- One PCI Express* 3.0 x16 graphics connector
- One PCI Express* Mini (Full Length) – supports mSATA
- One PCI Express* Mini (Half Length)

HEADERS
- One serial port header
- S/PDIF audio header

AUDIO
- Four-channel Intel® High Definition Audio[3] codec

JUMPERS AND FRONT-PANEL CONNECTORS
Jumpers
- Single configuration jumper design
- Jumper access for BIOS maintenance mode

Front-Panel Connectors
- Reset, HDD LED, power LEDs, power on/off
- Front-panel Hi-Speed USB 2.0 headers
- Front-panel audio header

MECHANICAL
Board Style
- Thin Mini-ITX

Board Size
- 6.7" × 6.7" (17 cm × 17 cm)

Baseboard Power Requirements
- Thin Mini-ITX 19 V

ENVIRONMENT
Operating Temperature
- 0° C to +55° C

Storage Temperature
- -20°C to +70°C

REGULATIONS AND SAFETY STANDARDS
United States and Canada
CSA / UL 60950-1, First Edition (Binational Standard)

Europe
(Low Voltage Directive 2006 / 95 / EC)
EN 60950-1

International
IEC 60950-1

EMC REGULATIONS (tested in representative chassis)
United States
FCC 47 CFR Part 15, Subpart B

Canada
ICES-003 Class B

Europe
(EMC Directive 2004 / 108 / EC)
EN 55022 and EN 55024

Australia / New Zealand
EN 55022 Class B

Japan
VCCI V-3, V-4 Class B

South Korea
KN-22 and KN-24

Taiwan
CNS 13438 Class B

International
CISPR 22 Class B

ENVIRONMENTAL COMPLIANCE EUROPE
Europe
Europe RoHS (Directive 2002/95/EC)

China
China RoHS (MII Order # 39)

1 Intel® Turbo Boost Technology – maximum single-core turbo frequency (GHz). Intel turbo Boost Technology requires a PC with a processor with Intel Turbo boost Technology capability. Intel Turbo Boost Technology performance varies depending on hardware, software, and overall system configuration. Check with your PC manufacturer on whether your system delivers Intel Turbo Boost Technology. See www.intel.com/technology/tuboboost for more information

2 Intel® Hyper-Threading Technology requires a computer system with a processor supporting HT Technology and an HT Technology-enabled chipset, BIOS, and operating system. Performance will vary depending on the specific hardware and software you use. See www.intel.com/info/hyperthreading for more information.

3 Intel® High Definition Audio requires a system with an appropriate Intel® chipset and a motherboard with an appropriate codec and the necessary drivers installed. System sound quality will vary depending on actual implementation, controller, codec, drivers, and speakers. For more information about Intel® HD Audio, refer to www.intel.com/design/chipsets/hdaudio.htm

4 64-bit computing on Intel® architecture requires a computer system with a processor, chipset, BIOS, operating system, device drivers, and applications enabled for Intel® 64 architecture. Processors will not operate (including 32-bit operation) without an Intel 64 architecture-enabled BIOS. Performance will vary depending on your hardware and software configurations. See http://developer.intel.com/technology/intel64/index.htm for more information.

5 System resources and hardware (such as PCI and PCI Express*) require physical memory address locations that can reduce available addressable system memory. This could result in a reduction of as much as 1 GB or more of physical addressable memory being available to the operating system and applications, depending on the system configuration and operating system.

6 WARNING: Altering PC memory frequency, voltage and/or latency may: (i) reduce system stability and useful life of the system, memory and processor; (ii) cause the processor and other system components to fail; (iii) cause reductions in system performance; (iv) cause additional heat or other damage; and (v) affect system data integrity. Intel has not tested, and does not warranty, the operation of the memory beyond its specifications. Intel assumes no responsibility that the memory, including if used with altered clock frequencies and/or voltages, will be fit for any particular purpose. Check with memory manufacturer for warranty and additional details.

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